

3/12/01

Sheet 1 of 5

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|---|--|---|--|--------------------------------------|---------------------------|
| FORM PTO-1449<br>(REV. 7-80)  |  | U.S. DEPARTMENT OF<br>COMMERCE<br>PATENT AND TRADEMARK OFFICE |  | ATTY. DOCKET NO.<br><br>QCPA363DIVC1 | SERIAL NO.<br><br>UNKNOWN |
| INFORMATION DISCLOSURE<br>STATEMENT BY APPLICANT<br>(Use several sheets if necessary) |  |   |  | APPLICANT<br>SERGE WILLENGER ET AL   |                           |
|   |  |   |  | FILING DATE<br>HEREWITH              | GROUP<br>UNKNOWN 2661     |
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## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL | DOCUMENT NUMBER  | DATE     | NAME             | CLASS | SUB<br>CLASS | FILING DATE<br>IF APPRO-<br>PRIATE |
|----------------------|------------------|----------|------------------|-------|--------------|------------------------------------|
| RW                   | AA 5 2 9 9 2 2 9 | 3/29/94  | Zscheile et al.  | 375   | 1            | 1/29/93                            |
| RW                   | AB 5 2 8 3 7 8 0 | 2/1/94   | Schuchman et al. | 370   | 50           | 10/18/90                           |
| RW                   | AC 5 2 6 3 0 5 0 | 11/16/93 | Sutterlin et al. | 375   | 1            | 9/9/92                             |
| RW                   | AD 5 2 5 8 9 8 3 | 11/2/93  | Lane et al.      | 370   | 118          | 12/18/91                           |
| RW                   | AE 5 2 1 2 6 8 4 | 5/18/93  | MacNamee et al.  | 370   | 24           | 8/30/90                            |
| RW                   | AF 5 1 3 6 5 8 6 | 8/4/92   | Greenblatt       | 370   | 110.4        | 12/4/89                            |
| RW                   | AG 5 1 0 3 4 5 9 | 4/7/92   | Gilhousen et al. | 375   | 1            | 6/25/90                            |
| RW                   | AH 5 1 0 1 5 0 1 | 3/31/92  | Gilhousen et al. | 455   | 33           | 11/7/89                            |
| RW                   | AI 5 0 6 8 8 4 9 | 11/26/91 | Tanaka           | 370   | 85.5         | 10/6/89                            |
| RW                   | AJ 5 0 5 6 1 0 9 | 10/8/91  | Gilhousen et al. | 375   | 1            | 11/7/89                            |
| RW                   | AK 5 0 2 2 0 4 6 | 6/4/91   | Morrow, Jr.      | 375   | 1            | 14/14/89                           |

## FOREIGN PATENT DOCUMENTS

| *EXAMINER<br>INITIAL | DOCUMENT NUMBER  | DATE     | COUNTRY | NAME              | CLASS | SUB<br>CLASS |
|----------------------|------------------|----------|---------|-------------------|-------|--------------|
| RW                   | AL 0 4 4 4 5 9 2 | 2/26/91  | EPO     | Shinmiyo, Saburo  | H04B  | 7/212        |
|                      | AM 0 4 1 8 8 6 5 | 9/19/90  | EPO     | Onoe, Seizo       | H04L  | 12/56        |
|                      | AN 0 4 1 2 5 8 3 | 3/25/86  | EPO     | Goode et al.      | H40B  | 1/56         |
|                      | AO 2 1 8 2 5 2 8 | 10/17/86 | UK      | Zheng Feng Huang  | H04J  | 3/16C        |
|                      | AP 2 0 2 2 3 6 5 | 5/30/79  | UK      | Mehmet Esin Uslug | H04Q  | 3/06         |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

|   |      |   |
|---|------|---|
| RW  | AR * | Advanced Engineering Mathematics, "Orthogonal Sets of Functions/Chapter 4",<br>Erwin Kreyszig, pp. 186-190, John Wiley & Sons, Inc. |
|   | AS   |   |
|   | AT   |   |
| EXAMINER<br><i>Robert A. W. Wilson</i>  |      | DATE CONSIDERED<br>3/1/06   |
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|----------------------|------------------|----------|------------------|-------|--------------|------------------------------------|
| RTH                  | AA 5 1 5 9 6 0 8 | 10/29/92 | Falconer et al.  | 375   | 1            | 8/29/91                            |
| RTH                  | AB 5 1 5 7 6 7 2 | 10/20/92 | Kondou et al.    | 371   | 43           | 3/14/90                            |
| RTH                  | AC 5 0 0 3 5 3 3 | 3/26/91  | Watanabe         | 370   | 85.5         | 7/25/89                            |
| RTH                  | AD 4 9 3 9 7 4 5 | 7/3/90   | Kirimoto et al.  | 375   | 1            | 8/28/89                            |
| RTH                  | AE 4 9 3 3 9 5 2 | 6/12/90  | Albrieux         | 375   | 1            | 4/4/89                             |
| RTH                  | AF 4 9 0 1 3 0 7 | 2/13/90  | Gilhousen et al. | 370   | 18           | 10/17/86                           |
| RTH                  | AG 4 8 7 2 2 0 0 | 10/3/89  | Jansen           | 380   | 34           | 4/15/88                            |
| RTH                  | AH 4 8 1 3 0 4 0 | 3/14/89  | Futato           | 370   | 111          | 10/31/86                           |
| RTH                  | AI 4 7 6 5 7 5 3 | 8/23/88  | Schmidt          | 379   | 60           | 3/3/87                             |
| RTH                  | AJ 4 7 3 0 3 4 0 | 3/8/88   | Frazier, Jr.     | 375   | 1            | 10/31/80                           |
| RTH                  | AK 4 6 8 8 0 3 5 | 8/18/87  | Gray et al.      | 340   | 825.52       | 7/16/86                            |

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| *EXAMINER<br>INITIAL | DOCUMENT NUMBER  | DATE     | COUNTRY | NAME                              | CLASS | SUB<br>CLASS |
|----------------------|------------------|----------|---------|-----------------------------------|-------|--------------|
| RTH                  | AL 9 1 0 7 0 3 0 | 10/19/90 | PCT     | Nolan, Michael, P. et al.         | H04J  | 3/06         |
|                      | AM 0 5 6 4 9 3 7 | 10/13/93 | EPO     | Roke Manor Research Ltd.          | H04B  | 7/26         |
|                      | AN 9 4 0 6 2 1 8 | 3/17/94  | PCT     | Telefonaktbolaget LM<br>Ericsson. | H04B  | 7/005        |
|                      | AO 2 2 7 3 0 0 9 | 6/1/94   | UK      | Motorola GmbH.                    | H03G  | 3/20         |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

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| EXAMINER<br><i>Robert H. Wilson</i>   | DATE CONSIDERED<br>4/1/06 |
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|----------------------|----|-----------------|----------|-----------------|-------|--------------|------------------------------------|
| RNN                  | AA | 4 6 7 2 6 5 8   | 6/9/87   | Kaverad et al.  | 379   | 63           | 10/23/86                           |
| RNN                  | AB | 4 6 4 1 3 2 2   | 2/3/87   | Hasegawa        | 375   | 1            | 10/18/84                           |
| RNN                  | AC | 4 6 3 5 2 2 1   | 1/6/87   | Kerr            | 364   | 821          | 1/18/85                            |
| RNN                  | AD | 4 5 8 0 2 6 2   | 4/1/86   | Naylor et al.   | 371   | 5            | 12/1/83                            |
| RNN                  | AE | 4 4 9 5 6 4 8   | 1/22/85  | Giger           | 455   | 73           | 12/27/82                           |
| RNN                  | AF | 4 4 7 2 8 1 5   | 9/18/84  | Gutleber        | 375   | 34           | 9/27/82                            |
| RNN                  | AG | 4 4 6 0 9 9 2   | 7/14/84  | Gutleber        | 370   | 19           | 11/4/82                            |
| RNN                  | AH | 4 3 0 1 5 3 0   | 11/17/81 | Gutleber        | 370   | 18           | 12/18/78                           |
| RNN                  | AI | 4 2 9 1 4 0 9   | 9/22/81  | Weinberg et al. | 375   | 1            | 7/18/78                            |
| RNN                  | AJ | 4 2 2 5 9 7 6   | 9/30/80  | Osborne et al.  | 455   | 226          | 2/28/78                            |
| RNN                  | AK | 4 2 2 2 1 1 5   | 9/9/80   | Cooper at al.   | 375   | 1            | 3/13/78                            |

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|                      | AL |                 |      |         |      |       |              |
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|                      | AN |                 |      |         |      |       |              |
|                      | AO |                 |      |         |      |       |              |
|                      | AP |                 |      |         |      |       |              |

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|----------------------|----|-----------------|----------|--------------------------|-------|--------------|------------------------------------|
| RWN                  | AA | 4 1 2 3 7 1 8   | 10/31/78 | Lampert et al.           | 325   | 474          | 9/27/71                            |
| RWN                  | AB | 4 1 1 2 2 5 7   | 9/5/78   | Frost                    | 179   | 2EB          | 3/24/77                            |
| KWN                  | AC | 4 0 5 2 5 6 5   | 10/4/77  | Denmer Dix Baxter et al. | 179   | 1.5 S        | 5/28/75                            |
| KWN                  | AD | 3 7 1 5 5 0 8   | 2/6/73   | Blasbalg                 | 179   | 15BC         | 9/15/67                            |
| KWN                  | AE | 3 3 1 0 6 3 1   | 3/21/67  | Brown                    | 179   | 15           | 6/3/63                             |
| KWN                  | AF | 5 1 2 8 9 6 5   | 07/07/92 | Henriksson               | 455   | 69           |                                    |
| KWN                  | AG | 5 3 9 0 3 3 8   | 2/14/95  | Bodin et al.             | 455   | 69           |                                    |
| KWN                  | AH | 5 3 0 5 4 6 8   | 4/19/94  | Bruckert et al.          | 455   | 69           |                                    |
| KWN                  | AI | 5 4 6 5 3 9 9   | 11/7/95  | Oberholtzer et al.       | 455   | 69           |                                    |
| KWN                  | AJ | 5 2 2 0 6 7 8   | 6/15/93  | Feei                     | 455   | 69           |                                    |
| KWN                  | AK | 5 4 8 7 1 8 0   | 1/23/96  | Ohtake                   | 455   | 69           |                                    |

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|                      | AL |                 |      |         |      |       |              |
|                      | AM |                 |      |         |      |       |              |
|                      | AN |                 |      |         |      |       |              |
|                      | AO |                 |      |         |      |       |              |
|                      | AP |                 |      |         |      |       |              |

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|----------------------|------------------|----------|----------------------|-------|--------------|-------------------------------|
| KWW                  | AA 5 2 4 5 6 2 9 | 9/14/93  | Hall                 |       |              |                               |
| KWW                  | AB 5 2 6 7 2 6 2 | 11/30/93 | Wheatley, III.       |       |              |                               |
| KWW                  | AC 5 3 8 3 2 1 9 | 1/17/95  | Wheatley, III et al. |       |              |                               |
| KWW                  | AD 5 2 0 4 8 7 6 | 4/20/93  | Bruckert et al.      |       |              |                               |
| KWW                  | AE 5 0 2 9 3 3 1 | 7/2/91   | Heichler et al.      |       |              |                               |
| KWW                  | AF 5 4 4 2 6 2 5 | 8/95     | Gitlin et al.        |       |              |                               |
| KWW                  | AG 5 9 9 1 2 8 4 | 11/99    | Willenegger et al    |       |              |                               |
| KWW                  | AH 5 7 1 0 9 8 2 | 1/98     | Laborde et al        |       |              |                               |
| KWW                  | AI 5 5 7 9 3 7 3 | 11/96    | Jang                 |       |              |                               |
| KWW                  | AJ 5 5 7 0 3 5 3 | 10/96    | Keskitalo et al      |       |              |                               |
| KWW                  | AK 6 0 1 8 5 4 4 | 1/00     | Kotzin et al         |       |              |                               |
| KWW                  | AL 5 9 3 0 6 8 4 | 7/99     | Keskitalo et al      |       |              |                               |

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| *EXAMINER<br>INITIAL | DOCUMENT NUMBER  | DATE     | COUNTRY | NAME             | CLASS | SUB<br>CLASS |
|----------------------|------------------|----------|---------|------------------|-------|--------------|
| KWW                  | AL 9 6 0 4 7 1 8 | 2/15/96  | PCT     | Qualcomm Inc.    |       |              |
|                      | AM 9 5 1 9 6 6 4 | 7/20/95  | PCT     | Nokia            |       |              |
|                      | AN 0 6 8 2 4 1 8 | 11/15/95 | EPO     | NTT Mobile Comm. |       |              |
| ✓                    | AO 2 3 0 0 5 4 6 | 11/6/96  | UK      | Samsung          |       |              |
|                      | AP               |          |         |                  |       |              |

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